CLAIMS

1. A method of preparing chemical pulp and a xylose solution by the use of alkaline or neutral cooking and a post hydrolysis of the pulp, wherein the post hydrolysis is performed directly on the pulp by the use of an acid.

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- 2. The method as claimed in claim 1, wherein the pulp is post-hydrolyzed with an acid until a xylose yield of no less than 5% is obtained, while the viscosity of the pulp remains at a value of no less than 300 ml/g.
- 3. The method as claimed in claims 1, wherein the pulp is post-hydrolyzed with an acid until a xylose yield of no less than 10% is obtained, while the viscosity of the pulp remains at a value of no less than 450 ml/g.
- 4. The method as claimed in claim 1, wherein the acid treatment is carried out with formic acid.
- 5. The method as claimed in claim 4, wherein the content of the acid solution is within the range 50 to 100%.

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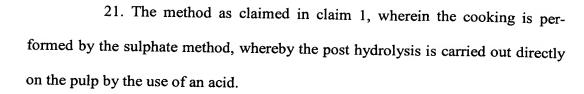
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- 6. The method as claimed in claim 4, wherein the content of the acid solution is within the range 75 to 90%.
- 7. The method as claimed in claim 4, wherein the acid treatment temperature is between 90 and 130°C.
- 8. The method as claimed in claim 4, wherein the acid treatment tem-20 perature is between 100 and 120°C.
 - 9. The method as claimed in claim 4, wherein the duration of the acid treatment is between 15 min and 4 h.

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- 10. The method as claimed in claim 4, wherein the duration of the acid treatment is between 20 min and 1.5h.
- 11. The method as claimed in claim 1, wherein the acid treatment is performed with a bisulphite solution.
- 5 12. The method as claimed in claim 11, wherein the SO₂ content of the bisulphite solution is within the range from about 1 to about 5%.
 - 13. The method as claimed in claim 11, wherein the SO₂ content of the bilsulphite solution is about 3%.
- 14. The method as claimed in claim 12, wherein the amount of bound10 SO₂ is about 10%.
 - 15. The method as claimed in claim 11, wherein the acid treatment temperature is about 110 to 150°C.
 - 16. The method as claimed in claim 11, wherein the acid treatment temperature is about 125 to 145°C.
 - 17. The method as claimed in claim 11, wherein the duration of the acid treatment is 1 to 3 h.
 - 18. A method as claimed in claim 1, wherein the acid treatment is performed after cooking.
- 19. The method as claimed in claim 1, wherein the acid treatment is20 performed after oxygen delignification.
 - 20. The method as claimed in claim 1, wherein the acid treatment is performed after bleaching.

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- 22. The method as claimed in claim 1, wherein birch is used as the raw material in the cooking.
 - 23. The method as claimed in claim 1, wherein after the acid treatment the obtained xylose solution and the chemical pulp are separated.
 - 24. The method as claimed in claim 23, wherein the acid used in the acid treatment is separated from the obtained xylose solution.
- 25. The method as claimed in claim 24, wherein the separated acid is recycled and reused in the hydrolysis.
 - 26. The method as claimed in claim 1, wherein the obtained chemical pulp is recovered.
- 27. The method as claimed in claim 26, wherein the obtained chemicalpulp is mixed with non-acid-treated pulp.
 - 28. A xylose solution obtained by the method of claim 24.
 - 29. Xylose obtained from the xylose solution of claim 28.
 - 30. A chemical pulp product obtained by the method of claim 26.

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